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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,481	02/13/2002	Hideyuki Yamaguchi	2271/66770	8767

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT PAPER NUMBER

2854

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/075,481

Applicant(s)

YAMAGUCHI, HIDEYUKI

Examiner

Daniel J. Colilla

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2,9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20020701, 20031121</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori (JP 10329445).

With respect to claim 1, Mori discloses a heat-sensitive stencil sheet having a porous resin layer 25 provided on a thermoplastic resin film 20 (see paragraph [0014] of the machine translation) and a porous fiber layer 26 on the surface of the porous resin layer 25 as shown in Figure 5 of Mori. In the last three lines of paragraph [0081] in the machine translation of Mori, Mori discloses that an adhesive was applied to the porous fiber film in order to laminate the porous resin film to the fiber film. In paragraphs [0101] and [0103] of the machine translation, Mori discloses that  $0.8\text{g/m}^2$  and  $0.4\text{g/m}^2$  of adhesive were used in two different examples. These values fall in the range of  $0.05\text{g/m}^2$  to  $1.5\text{g/m}^2$  as recited in the claim. In paragraph [0010], in the last four lines of the machine translation, Mori discloses an adhesive strength between the porous fiber film and the porous resin layer as being  $1\text{-}10\text{g} / 25\text{mm}$ . Converting the units of  $\text{g/mm}$  into  $\text{N/m}$  it is necessary to convert the mass into a force or weight. Using the acceleration of gravity equal to  $9.8\text{ m/s}^2$ , Mori discloses the strength being in the range of  $.392\text{ N/m}$ -  $3.92\text{ N/m}$  which at least partially falls in the range recited in claim 1.

Art Unit: 2854

With respect to claim 13, Mori discloses granular shaped resin segments as shown in Figure 5.

With respect to claims 14 and 16, Mori discloses pore sizes of  $1\text{ }\mu\text{m}$  -  $50\text{ }\mu\text{m}$  as mentioned in paragraph [0037] of the machine translation of Mori which covers the range of  $5\text{ }\mu\text{m}$  -  $20\text{ }\mu\text{m}$ , and with respect to claim 16, at least a portion of the range disclosed by Mori falls between  $25\text{ }\mu\text{m}$  -  $60\text{ }\mu\text{m}$

With respect to claim 15, Figure 5 of Mori shows the pores connected in a depth direction and to a lesser degree in a transverse direction.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori(JP 10329445).

With respect to claims 4-5, Mori discloses the claimed stencil sheet except for the amount of the porous resin layer. However, the exact amount of the porous resin layer used would have been obvious to one of ordinary skill in the art through routine experimentation based on the properties of the porous resin layer and other factors of the heat-sensitive stencil sheet.

With respect to claims 7-8, Mori discloses the claimed stencil sheet except for the amount of the porous fiber layer. However, the exact amount of the porous fiber layer used would have

Art Unit: 2854

been obvious to one of ordinary skill in the art through routine experimentation based on the properties of the porous fiber layer and other factors of the heat-sensitive stencil sheet.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (JP 10329445) as applied to claims 1 and 13-16 above, and further in view of Matsuo et al. (US 4,981,746).

With respect to claim 3, the type of adhesive used by Mori is not known to the examiner. However, Matsuo et al. teaches that it is known to use an ionizing radiation-curable type adhesive to bond layers in a heat-sensitive stencil as described in col. 2, lines 6-10 of Matsuo et al. It would have been obvious to combine the teaching of Matsuo et al. with the heat-sensitive stencil sheet disclosed by Mori the adhesive is of the non-solvent type, there is little impregnation of the solvent into the porous layers to give excellent image quality and image density. Moreover, ionization radiation curing is possible at low temperatures, and therefore the stencil can be produced without causing any deformation of the thermoplastic layer (Matsuo et al., col. 2, lines 18-24).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (JP 10329445) as applied to claims 1 and 13-16 above, and further in view of Kobayashi (JP 06135172).

Mori discloses the claimed heat-sensitive stencil sheet except for the porous resin layer being a foamy film. However, Kobayashi teaches a heat-sensitive stencil sheet that includes a foamy layer 1A as a porous layer. It would have been obvious to combine the teaching of

Art Unit: 2854

Kobayashi with the heat-sensitive stencil sheet disclosed by Mori for the advantage of preventing the rear sheet of the stencil from becoming stained with ink. *Note: the method of forming the foamy film holds no patentable weight in a product claim.*

***Allowable Subject Matter***

7. Claims 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,595,129 to Mori is cited to show another example of a heat-sensitive stencil with a porous resin layer and a porous fiber layer.

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Upon closer review of the Mori (JP 10329445) it was discovered that Mori does disclose the bonding strength between the porous resin layer and the porous fiber layer as recited in claim

1. The appropriate prior art rejection has been changed as noted above. Since this is a new grounds of rejection not required by applicant's amendment, this action is made non-final.

Art Unit: 2854

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (571)272-2157. The examiner can normally be reached Mon.-Thur. between 7:30 am and 6:00 pm. Faxes regarding this application can be sent to (703)872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (571)272-2168. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Colilla  
Primary Examiner  
Art Unit 2854

November 17, 2004